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EXAMINER

NALEVANKO, CHRISTOPHER R

ART UNIT PAPER NUMBER

2611

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/536,101	Applicant(s) FINSETH ET AL.	
	Examiner Christopher R Nalevanko	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-14,16-24,26-34 and 36-62 is/are pending in the application.
- 4a) Of the above claim(s) 7,15,25 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-14,16-24,26-34 and 36-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 08/05/2004 have been fully considered but they are not persuasive.

Regarding Claims, 1, 9, 17, 19, 27, 37, and 44, Applicant argues that “none of the references teach inserting multiple copies of the receiver identification data into data representing a frame of the television content” (page 15 lines 20-21). Examiner asserts that Ito shows the ability to insert multiple copies of the ID data into data representing a frame of the television content. Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into the luminance value of each pixel (page 3 sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to numerous pixels and groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data.

2. Applicant's failure to adequately traverse the Examiner's taking of Official Notice in the last office action is taken as an admission of the facts noticed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 19, 20, and 57-59 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ito et al.

Regarding Claim 19, Ito shows a receiver for receiving content (page 1 section 0010, page 2 sections 0031-0033) comprising multiple frames (page 3 section 0047, motion images, different image frames), means for inserting receiver identification data into data representing the content (page 2 sections 0035-0039), and means for generating a display of images based upon the data representing the content and the receiver identification data (page 2 sections 0038-0039). Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into the luminance value of each pixel (page 3 sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to numerous pixels and groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data.

Regarding Claim 20, Ito shows that the receiver identification data is the receiver ID number (page 1 section 0013).

Regarding Claim 57, Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to a groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data.

Regarding Claim 58, Ito shows that the group consists of a 3x3 block of pixels, which is a block of 3 pixels for 3 lines (page 3 sections 0049-0050, page 4 section 0055).

Regarding Claim 59, Ito shows that a line comprises a plurality of pixels (3x3 block, at least) (page 3 sections 0049-0050, page 4 section 0055). Ito further shows that a bit of the line data is substituted with a bit of the ID data (page 3 sections 0044, fig. 8). Ito also shows that not all of the pixel data needs to be changed in order to insert the ID data (fig. 13-16, page 3 section 0050, showing the use of a "modulo 3 arithmetic" that can add 0 to the pixel value, which does not change the value and substantially skips a pixel).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6, 8-10, 14, 16-18, 24, 26-30, and 34, 36-40, 44-56, and 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al in further view of Kimura et al.

Regarding Claim 1, Ito shows a receiver for receiving content (page 1 section 0010, page 2 sections 0031-0033) comprising multiple frames (page 3 section 0047, motion images, different image frames), means for inserting receiver identification data into data representing the content (page 2 sections 0035-0039), and means for generating

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a display of images based upon the data representing the content and the receiver identification data (page 2 sections 0038-0039). Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into the luminance value of each pixel (page 3 sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to numerous pixels and groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data. Although Ito shows using this system for video, Ito fails to specifically state that the system is used in the broadcast television environment. Kimura shows a very similar ID inserting system that is used in the broadcast television environment (col. 2 lines 5-45, col. 5 lines 20-67). Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Ito for television content so that the system of inserting receiver data could be used to catch copyright violators in the TV environment.

Regarding Claim 2, Ito shows that the receiver identification data is the receiver ID number (page 1 section 0013).

Regarding Claim 6, Ito shows modify the saturation data (page 2 section 0038).

Regarding Claim 8, Ito shows that receiver ID information is inserted in all images before they are displayed. Furthermore, Kimura shows inserting ID information into television programming content. Ito and Kimura fail to show displaying program guide data. Official Notice is given that it is well known and expected in the art to display program guide data on a screen. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito

and Kimura with the ability to show EPG data so that the viewer could interactively view upcoming programs and shows. Furthermore, since all frames of the Ito system are embedded with the receiver ID data before display, it is inherent that the EPG frames would contain the receiver data as well.

Regarding Claim 9, the limitations of the method claim have been discussed with regards to the system claim of Claim 1.

Regarding Claim 10, all of the limitations of the claim have been discussed with regards to Claim 2.

Regarding Claim 14, all of the limitations of the claim have been discussed with regards to Claim 6.

Regarding Claim 16, Ito shows that receiver ID information is inserted in all images before they are displayed. Furthermore, Kimura shows inserting ID information into television programming content. Ito and Kimura fail to show displaying program guide data. Official Notice is given that it is well known and expected in the art to display program guide data on a screen. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to show EPG data so that the viewer could interactively view upcoming programs and shows. Furthermore, since all frames of the Ito system are embedded with the receiver ID data before display, it is inherent that the EPG frames would contain the receiver data as well.

Regarding Claim 17, Ito shows a receiver for receiving video content comprising multiple frames (page 3 section 0047, motion images, different image frames) and

inserting receiver identification data into generated images in a manner that is undetectable to the casual observer (page 2 sections 0034-0035). Ito further shows a controller, or ID imprinter, for retrieving identification data and changing values of the pixel data to values of the identification data, the controller thereby embedding the id data into the frame (page 2 sections 0038-0039) and a display generator for generating a display of the first image (page 2 section 0037, see fig. 3). Also, Ito shows an image decoder, which acts as a storage, or buffer, prior to imprinting the first image with id data (see fig. 3, page 2 section 0039). Finally, Ito shows an "ID Holder," which acts as memory, or storage, for the receiver's unique ID (see fig. 3). Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into the luminance value of each pixel (page 3 sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to numerous pixels and groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data. Ito fails to show a tuner or that television content is received. Kimura shows that television content is received and the use of television tuning circuitry (col. 5 lines 25-67, col. 6 lines 1-44, figs. 3 and 5). Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Ito for television content so that the system of inserting receiver data could be used to catch copyright violators in the TV environment.

Regarding Claim 18, the limitations of the method claim have been discussed with regards to the system claim of Claim 17.

Regarding Claim 24, the limitations of the claim have been discussed with regards to Claim 6.

Regarding Claim 26, Ito shows that receiver ID information is inserted in all images before they are displayed. Furthermore, Kimura shows inserting ID information into television programming content. Ito and Kimura fail to show displaying program guide data. Official Notice is given that it is well known and expected in the art to display program guide data on a screen. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to show EPG data so that the viewer could interactively view upcoming programs and shows. Furthermore, since all frames of the Ito system are embedded with the receiver ID data before display, it is inherent that the EPG frames would contain the receiver data as well.

Regarding Claim 27, the limitations of the claim have been discussed with regards to Claim 1.

Regarding Claim 28, Ito shows substituting receiver identification data for a subset of the data representing the content (page 2 sections 0038-0039).

Regarding Claim 29, Ito shows presenting the modified content to the user on a presentation device (page 2 sections 0038-0039).

Regarding Claim 30, Ito shows that the receiver identification data is the receiver ID number (page 1 section 0013).

Regarding Claim 34, Ito shows modify the saturation data (page 2 section 0038).

Regarding Claim 36, Ito shows that receiver ID information is inserted in all images before they are displayed. Furthermore, Kimura shows inserting ID information into television programming content. Ito and Kimura fail to show displaying program guide data. Official Notice is given that it is well known and expected in the art to display program guide data on a screen. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to show EPG data so that the viewer could interactively view upcoming programs and shows. Furthermore, since all frames of the Ito system are embedded with the receiver ID data before display, it is inherent that the EPG frames would contain the receiver data as well.

Regarding Claim 37, Ito shows a receiver for receiving video content comprising multiple frames (page 3 section 0047, motion images, different image frames). Ito further shows a controller, or ID imprinter, for modifying at least a portion of the data representing program content according to receiver identification data (page 2 sections 0038-0039). Also, Ito shows an image decoder, which acts as a storage, or memory, prior to imprinting the first image with id data (see fig. 3, page 2 section 0039). Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into the luminance value of each pixel (page 3 sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to numerous pixels and groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data. Ito fails to show a tuner or that television content is received. Kimura shows that television

content is received and the use of television tuning circuitry (col. 5 lines 25-67, col. 6 lines 1-44, figs. 3 and 5). Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Ito for television content so that the system of inserting receiver data could be used to catch copyright violators in the TV environment.

Regarding Claim 38, Ito shows that the controller modifies at least a portion of the pixel data according to the receiver identification data (page 2 section 0038-0039, page 3 sections 0043-0044, 0047-0050).

Regarding Claim 39, Ito shows an "ID Holder," which acts as memory, or storage, for the receiver's unique ID (see fig. 3).

Regarding Claim 40, Ito shows that the receiver identification data is the receiver ID number (page 1 section 0013).

Regarding Claim 44, Ito shows logic for computing a plurality of order-based analysis functions for records stored in a computer system comprising receiving video data (page 1 section 0010, page 2 sections 0031-0033) comprising multiple frames (page 3 section 0047, motion images, different image frames), modifying the data to include receiver ID data (page 2 sections 0035-0039), and providing the data to a presentation device (page 2 sections 0038-0039). Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into the luminance value of each pixel (page 3 sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to numerous pixels and groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data. Although Ito shows using this system for

video, Ito fails to specifically state that the system is used in the broadcast television environment. Kimura shows a very similar ID inserting system that is used in the broadcast television environment for program data (col. 2 lines 5-45, col. 5 lines 20-67). Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Ito for television content and program data so that the system of inserting receiver data could be used to catch copyright violators in the TV environment.

Regarding Claim 45, Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID information can be attached to a groups of pixels, multiple copies of the ID are therefore inserted into one frame of programming data.

Regarding Claim 46, Ito shows that the group consists of a 3x3 block of pixels, which is a block of 3 pixels for 3 lines (page 3 sections 0049-0050, page 4 section 0055).

Regarding Claim 47, Ito shows that a line comprises a plurality of pixels (3x3 block, at least) (page 3 sections 0049-0050, page 4 section 0055). Ito further shows that a bit of the line data is substituted with a bit of the ID data (page 3 sections 0044, fig. 8). Ito also shows that not all of the pixel data needs to be changed in order to insert the ID data (fig. 13-16, page 3 section 0050, showing the use of a "modulo 3 arithmetic" that can add 0 to the pixel value, which does not change the value and substantially skips a pixel).

Regarding Claims 48-50, the limitations of the Claims have been discussed with regards to Claims 45-47.

Regarding Claims 51-53, the limitations of the Claims have been discussed with regards to Claims 45-47.

Regarding Claims 54-56, the limitations of the Claims have been discussed with regards to Claims 45-47.

Regarding Claims 60-62, the limitations of the Claims have been discussed with regards to Claims 45-47.

5. Claims 3-5, 11-13, 31-33, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al in further view of Kimura et al and Narayanaswami et al.

Regarding Claim 3, Ito and Kimura fail to show embedding date information in the receiver identification data. Narayanaswami shows embedding date information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to insert date data so that one could identify when an image was displayed.

Regarding Claim 4, Ito and Kimura fail to show embedding time information in the receiver identification data. Narayanaswami shows embedding time information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to insert date data so that one could identify when an image was displayed.

Regarding Claim 5, Ito and Kimura fail to show using a removable access card for generating ID data. Narayanaswami shows using a removable access card for generating ID data (page 3 section 0036). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to use a removable access card so that users could easily be changed by swiping their individual cards.

Ito, Kimura, and Narayanaswami fail to show using billing information from an access card. Official Notice is taken that it is well known and expected in the art to use billing information from an access card. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito, Kimura, and Narayanaswami with the ability to use billing information on a card so that the system would be able to embed a variety of receiver data into the watermark.

Regarding Claim 11, all of the limitations of the claim have been discussed with regards to Claim 3.

Regarding Claim 12, all of the limitations of the claim have been discussed with regards to Claim 4.

Regarding Claim 13, all of the limitations of the claim have been discussed with regards to Claim 5.

Regarding Claim 31, all of the limitations of the claim have been discussed with regards to Claim 3.

Regarding Claim 32, all of the limitations of the claim have been discussed with regards to Claim 4.

Regarding Claim 33, all of the limitations of the claim have been discussed with regards to Claim 5.

Regarding Claim 41, all of the limitations of the claim have been discussed with regards to Claim 3.

Regarding Claim 42, all of the limitations of the claim have been discussed with regards to Claim 4.

Regarding Claim 43, all of the limitations of the claim have been discussed with regards to Claim 5.

6. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al in further view of Narayanaswami et al

Regarding Claim 21, Ito fails to show embedding date information in the receiver identification data. Narayanaswami shows embedding date information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito with the ability to insert date data so that one could identify when an image was displayed.

Regarding Claim 22, Ito fails to show embedding time information in the receiver identification data. Narayanaswami shows embedding time information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito with the ability to insert date data so that one could identify when an image was displayed.

Regarding Claim 23, Ito fails to show using a removable access card for generating ID data. Narayanaswami shows using a removable access card for generating ID data (page 3 section 0036). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito with the ability to use a removable access card so that users could easily be changed by swiping their individual cards.

Ito and Narayanaswami fail to show using billing information from an access card. Official Notice is taken that it is well known and expected in the art to use billing information from an access card. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito, Kimura, and Narayanaswami with the ability to use billing information on a card so that the system would be able to embed a variety of receiver data into the watermark.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R Nalevanko whose telephone number is 703-305-8093. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 703-305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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cn



CHRIS GRANT
PRIMARY EXAMINER